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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/725,646 | 11/29/2000 | Guanghua Huang | 116.011US1 | 9689 |

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EXAMINER

SUNDARAM, T R

ART UNIT PAPER NUMBER

2858

DATE MAILED: 01/16/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/725,646

Applicant(s)
Guanghua Huang et al.

Examiner
T. R. Sundaram

Art Unit
2858



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Oct 15, 2002
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 25-33 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-13, 17-19, and 25-31 is/are allowed.
- 6) ☒ Claim(s) 14-16 is/are rejected.
- 7) ☒ Claim(s) 32 and 33 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 7
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed October 15, 2002 has been received and it has been placed of record in the application file.

Specification

2. The new abstract submitted on October 15, 2002 is approved by the Examiner.

Earlier Claim Objections and Withdrawal

3. The earlier objections to claims 20-28 are hereby withdrawn in view of the cancellation of claims 20-24, and the amendment to (independent) claim 25.

New Claim Objections

4. Claims 32 and 33 objected to because of the following informalities: Claim 32 depends on itself; it is likely that line 1 of claim 32 should read "The method of claim 31..."

Claim 33 depends on claim 32 and therefore inherits its deficiency.

Appropriate correction is required.

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Earlier Claim Rejections and Amendments

5. In response to the earlier rejections of the claims in the First Office Action on Merits (FOAM), based on *Taura et al.*, both alone and in combination with other prior art, the Applicants have amended, in an amendment received October 15, 2002, the independent claims, as well as some of the dependent claims. The Applicants have also submitted detailed arguments in support of the allowability of the claims, in their amended forms.

The Examiner has considered the claim amendments and arguments in full, and finds the latter only partially persuasive. Specifically, the amendments are deemed to render claims 1-13, 17-19 and 25-31 novel and distinct over prior art, so that they are hereby allowed, for reasons to be detailed below. Claim 14 and its dependent claims are again rejected.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b).

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Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. Claims 14-16 are rejected under 35 U.S.C. 102(e) as being anticipated by *Siddiqui et al.*

Regarding claim 14, *Siddiqui et al.* discloses a test probe (70, Fig. 3; abstract; and column 7, line 56) comprising: first and second signal probe tips (any pair of 72s, Fig. 3); a single ground structure (74) between first and second probe tips).

Regarding claim 15, *Siddiqui et al.* discloses first and second contact areas (Fig. 3) and a ground contact area (bottom surface of template 76) which is greater than at least one of the first and second contact areas (Fig. 3).

Regarding claim 16, the test probe of *Siddiqui et al.* includes a ground contact surface (Fig. 3, bottom surface of template 76) and a non-contact surface (top surface of template 76) substantially parallel to the ground contact surface and offset from the contact surface (Fig. 3).

8. Claim 14 is also rejected under 35 U.S.C. 102(b) as being anticipated by *Triplett*.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Triplett discloses a test probe (Figs. 1 and 2; abstract; and column 1, lines 13-16) comprising: first and second signal probe tips (16 and 17, Figs. 1 and 2); a single ground structure (case 11, Figs. 1 and 3; or the operator, Fig. 6) between first and second probe tips).

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Consideration of the Applicants Arguments

9. Applicant's arguments with respect to claims 14-16 have been considered but are moot in view of the new grounds of rejection.

Reasons for Allowance

10. The following is an examiner's statement of reasons for allowance:

Regarding claim 1, prior art does not disclose a test probe for high-frequency devices comprising two or more signal probe tips, and a ground contact surface with substantially greater than the contact surface of at least one signal probe tip, wherein the ground contact surface is positioned between at least two of the signal probe tips, in the combination claimed.

Regarding claims 10 and 17, prior art does not disclose a test system for, or a method of testing, two or more microwave devices with a test head comprising two or more signal probe tips, and a ground contact surface with substantially greater than the contact surface of at least one signal probe tip, wherein the ground contact surface is positioned between at least two of the signal probe tips, in the combination claimed.

Regarding claim 25, prior art does not disclose testing a high-frequency electronic assembly with a test head having first and second test-head contacts, sensing electrical communication between the first test-head contact and a first conductive region, and automatically introducing a test-signal-through-the second-test-head contact into the electronic

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assembly in response to sensing electrical communication between the first test head contact and the second conductive region, in the combination claimed.

Regarding claim 29, prior art does not disclose a method of establishing an electrical coupling of a predetermined characteristic impedance for a surface mount package with a ground pad between first and second signal ports, by adjusting the depth of the ground contact by positioning the overhanging portion of a ground probe a predetermined distance from the first signal port and establishing a predetermined impedance of the first signal port, in the combination claimed.

Regarding claim 31, prior art does not disclose a method of testing comprising a test head with first and second conductive probes, establishing a first characteristic impedance, and then changing at least one of the first and second conductive probes for a second characteristic impedance, in the combination claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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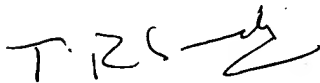
Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Hayes discloses a test probe (Figs. 1 and 2) with first and signal probes (24 and 62) and a ground contact surface (housing and 58; column 2, line 49).

Suzuki et al. discloses a probe board (Fig. 11(a)) with first and second signal contact areas (32) and a ground contact area (36) located between the contact areas, and larger in size than the signal contact areas.

12. Any inquiry concerning this communication should be directed to Dr. T. R. (Joe) Sundaram at telephone number (703) 308-6821. If attempts to reach the Examiner by phone are unsuccessful, the Examiner's supervisor, N. Le can be reached at (703) 308-0750.



T. R. Sundaram

January 10, 2003



N. Le
Supervisory Patent Examiner
Technology Center 2800